ROUND 11 CAPITAL PROJECT NOMINATION FORM
LAKE TAHOE FEDERAL SHARE EIP CAPITAL PROJECTS
APPENDIX K

Project Name:	Aspen Community Restoration	**EIP Number:** (***Required***)	10080
Federal Agency Sponsor: (***Required***)	USFS, LTBMU	**Contact:**	Victor Lyon
Threshold:	V1, W2, SC2, and SR2	**Phone Number:**	(530) 543-2749
Threshold Standard:	V1 Deciduous Riparian, W2 Riparian Habitat, SC2 Stream Environment Zone, and SR2 Scenic Quality	**Email:**	vlyon@fs.fed.us
FUNDING REQUESTED IN THIS ROUND:	**$** 330,000		

Federal Share EIP Consideration

Select "yes" or "no" for each question. If you have a "yes" response, briefly describe. ***Projects must meet one or more of these 5 items.***

1. **Does the project involve federal land? If yes, is the federal land involved important to successful implementation of the project?** — ***Yes*** ☒ ***No*** ☐

The Aspen Community Restoration project would occur solely on federal lands managed by the USFS Lake Tahoe Basin Management Unit.

2. **Is this project identified in the EIP? If yes, please ensure the EIP number is identified in the above project information box. If no, provide a description of the projects contribution to the EIP program.** — ***Yes*** ☒ ***No*** ☐

EIP Number 10080.

3. **Does the project involve the conservation of a federal or regional threatened, rare, endangered, or special interest species?** — ***Yes*** ☒ ***No*** ☐

The Aspen Community Restoration Project will restore habitat for federal and regional sensitive and special interest plant and wildlife species such as botrychiums (moonworts) and the northern goshawk.

4. **Does the project involve an identified federal interest such as the detection and eradication of non-native invasive species (aquatic or terrestrial)? If yes, identify the species?** — ***Yes*** ☒ ***No*** ☐

The Aspen Community Restoration Project will contribute to the control of non-native invasive species (e.g. bullthistle) in the project area by treating existing, non-native invasive populations and developing robust native plant communities in the understory, which are more resistant and resilient to invasion.

5. **Does the project contribute to supporting implementation of capital projects in the EIP? Such projects that fulfill this function would include technical assistance, data management, and/or resource inventories?** — ***Yes*** ☐ ***No*** ☒

Check all Capital Focus Area(s) that apply:

- ☒ 1. **Watershed and Habitat Improvement**
- ☒ 2. **Forest Health**
- ☐ 3. **Air Quality and Transportation**
- ☒ 4. **Recreation and Scenic**

Check all that apply (must meet a minimum of one category):

- ☒ 1. **Continued emphasis on forest ecosystem health/fuels reduction projects considering the LTBMU Stewardship Fireshed Assessment and Lake Tahoe Basin Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy.**

- ☒ 2. **Continued implementation of projects approved in Rounds 5 through 10 which implement the EIP. Project proposal should clearly describe the phase/product being produced along with the consequence of not completing the project phase proposed for Round 10.**

  List Rounds and funding:

Round 5 ($215,000) and Rounds 6, 8, and Round 10 ($200,000 each)

- ☐ *3.* **Project is consistent with and contributes toward TMDL pollutant reductions within the four source categories (atmospheric, urban & groundwater, forested uplands, and stream channel).** ***NOTE: If "yes", then please respond to questions in the accomplishments section of the nomination proposal.***

- ☐ 4. **Control of aquatic invasive species and prevention and/or detection of new aquatic invasive species.**

Project Nomination Proposal Outline

Project Summary (a brief summary which clearly describes the proposed project –maximum 200 words)

- Summarize ONLY this Round 11 project**.**

The Round 11 Aspen Community Restoration Project will restore (thin conifers from) approximately 29 acres of aspen at moderate or greater risk of loss from the landscape and burn approximately 152 acres of slash piles created in this and earlier project phases on Forest System lands in the Lake Tahoe Basin. This project will monitor the effects of burning piles within aspen stands. This Round 11 project will move aspen stands toward the desired condition where 1) the upper canopy is dominated by aspen; 2) conifers comprise less than 25% of the canopy; and 3) aspen regeneration is vigorous. Treated aspen stands would be expected to regenerate and mature toward a low or negligible risk of loss during the estimated 20-year lifespan of the treatments.

Project Description

Introduction

- Provide project background which explains the situation and state the problem and how it will be addressed.

Note: *Focus needs to be the project in Round 11 not a history of an ongoing project or program.*

Aspen stands were identified as Ecologically Significant Areas (ESAs) in the Lake Tahoe Watershed Assessment (USDA 2000) for their exceptional biological diversity and rarity on the landscape. The USFS has identified approximately 2,400 acres of aspen at moderate or greater risk of loss on LTBMU forest system lands that will not be treated by fuel reduction or other vegetation projects. Approximately 131 acres of slash piles created by earlier phases of the Aspen Community Restoration Project need to be burned. Additional acres of burn piles will be created by further aspen restoration and need to be burned. Monitoring of pile burning in aspen stands initiated in partnership with Humboldt State University needs to be completed.

The Round 11 Aspen Community Restoration Project will restore approximately 29 acres of aspen in six stands identified to be at moderate or greater risk of loss from the landscape. These stands were selected for restoration based on their value to ecosystems at the watershed-scale based on factors such as: 1) risk of loss; 2) proximity to other aspen stands; 3) anthropogenic disturbance; and 4) where pre-implementation wildlife monitoring has been completed. An estimated 21 of the 29 acres to be restored will be thinned by hand and the remainder treated mechanically. Approximately 131 acres of existing slash piles and 21 acres of slash piles created by this Round 11 project (152 total acres) will be burned. The LTBMU and Humboldt State University (HSU) are monitoring the effects of pile burning in aspen stands and have collected pre-implementation data in four stands. This project would collect post-implementation data, analyze pre-and post-treatment information, and adaptively manage pile burning practices in aspen stands.

- Describe what Round 11 is specifically funding; list the number of years the requested funding will cover; briefly describe how this project links into previous and future projects, and identify other round funding.

NOTE: *Focus should be on finishing current/phased projects. If project is new in Round 11, clearly identify if the project is for planning or implementation and how it will be completed with Round 11 funds. Identify if Round 12 or other funds will be needed to complete the project. Please identify total non-SNPLMA funds that are being contributed/dedicated to the proposed Round 11 project and the source of those funds.*

The Round 11 Aspen Community Restoration Project will restore stands identified to be at moderate or greater risk of loss from the landscape. These stands were identified from Round 5 SNPLMA funding. Round 6 SNPLMA funding completed the environmental documentation (e.g. NEPA). Implementation was funded by SNPLMA Rounds 6, 8, and 10, Bureau of Reclamation partnership funds, and appropriated Forest Service funding. Approximately 218 acres of aspen were restored using previous funding sources.

The Round 11 Aspen Community Restoration Project proposes to burn approximately 152 acres of slash piles created during the previous project phases located in the Ward Creek, Tallac Creek, Taylor Creek, Upper Truckee River, Cold Creek, and Secret Harbor Creek watersheds. This Round 11 project will also restore (thin conifers from) approximately 29 acres of aspen stands located at Ward Creek (1 stand; 5 acres), Page Meadows (5 stands; 16 acres), and Blackwood Creek (1 stand; 8 acres).

Slash piles will cure for approximately two years and be burned as soon as feasible (e.g. dependent on weather conditions). Therefore, slash piles created in 2011 from the Round 11 funding will be "cured" by fall 2013 and burned by winter 2014. All Round 11 Aspen Community Restoration Project slash piles will be burned by winter 2014 using the funds received from this proposal.

Pile burning monitoring funded from the Round 11 project will start in 2011 and continue through 2014. Adaptive management of pile burning based on this monitoring will begin concurrently (in 2011). The pile burning monitoring collaboration with HSU for the Round 11 Aspen Community Restoration Project will be completed during winter 2013/2014 (a year prior to burning of the last slash piles).

Field preparation for thinning (e.g. tree and unit marking) will occur during summer 2011. Implementation of hand thinning will begin in summer/fall 2011 and be completed by winter 2011. A contract for cut-to-length mechanical thinning will be released in fall 2011 and may require two years to complete due to the limited availability of suitable contractors. Mechanical thinning will not create slash piles. All Round 11 Aspen Community Restoration Project thinning will be completed by winter 2013.

In summary, the Round 11 Aspen Community Restoration Project will accomplish the following six components (see map):

A. Burn 67 acres of slash piles created in 2009
B. Burn 64 acres of slash piles created in 2010
C. Burn 21 acres of slash piles created in 2011-12
D. Restore 21 acres of aspen by hand
E. Restore 8 acres of aspen mechanically
F. Complete pile burning in aspen monitoring with Humboldt State University

Stratified levels of funding would complete components A-F as follows:

1. $330,000 – components A-F (full implementation)
2. $270,000 – components A-D and F (all except mechanical aspen restoration)
3. $190,000 to 270,000 – components A, B, F, and a scaled number of acres for C and D
4. $190,000 – components A, B, and F (pile burning and monitoring only)

Approximately $10,000 of in-kind funding has been contributed by Humboldt State University (HSU) for pre-implementation pile burn monitoring. HSU has informally offered a like amount of in-kind funding for post-implementation monitoring for this project.

Approximately $350,000 in Round 12 funding may be requested to restore (and pile burn) approximately an additional 100 acres of the remaining estimated 2,150 acres of aspen at moderate or greater risk of loss in the Lake Tahoe Basin. These additional acres will not be treated by fuel reduction or other vegetation projects.

- Describe the "readiness" of this project to move forward (urgency, capacity, capability, environmental documentation, interagency agreements, etc)

Environmental documentation and analysis (e.g. NEPA) for this project has been completed; this project is ready to implement. Slash piles have been and continue (through previous round funding) to be created and need to be burned. We and our partners at HSU are poised to complete the pile burning monitoring started in 2009.

- Describe partnerships for this project. (if applicable, project should identify committed/secured partner funding and/or other partner contributions (describe) and how it is integrated into the project)

The Aspen Community Restoration Project has a partnership with Humboldt State University for pile burning monitoring. HSU has contributed approximately $10,000 of in-kind funds for pre-implementation monitoring and is expected to contribute a like amount for post-implementation monitoring. Partnerships with the University of Arizona, Texas A&M, and University of Nevada, Reno for wildlife monitoring will continue with post-implementation monitoring in a later project phase after restored aspen stands have matured.

Note: *The form requests information about project goals, objectives, accomplishments, and questions the program is designed to answer across several different sections. These issues are closely linked and your individual responses should provide a cohesive description.*

Goal – Purpose and Need (“larger” statement of future expected outcome – usually not measurable)

Aspen were identified in the Lake Tahoe Watershed Assessment as Ecologically Significant Areas because “they have an exceptionally diverse array of associated species,” yet occupy less than two percent of the landscape.

The purpose of the Aspen Community Restoration Project is to reduce conifer encroachment in aspen stands, and to increase aspen regeneration, the spatial extent of aspen stands, and enhance the diversity and abundance of aspen community species.

Objectives (specific measurable statements of action which when completed will move towards achieving the goal)

Note: *Objectives will form the basis for the milestones/deliverables to be identified in Appendix B-8*

- Describe how fulfilling objectives will contribute to the achievement of one or more environmental thresholds (air quality, water quality, soil conservation, vegetation, fisheries, wildlife, scenic, noise, recreation). Provide measures if applicable. For example: acres treated, miles of stream restored for each objective.

The objectives of the Round 11 Aspen Community Restoration Project are to burn approximately 152 acres of slash piles created during this and earlier project phases and to restore approximately 29 acres of aspen stands. Fulfilling these Round 11 project objectives will contribute to the achievement of V1 Deciduous Riparian, W2 Riparian Habitat, SC2 Stream Environment Zone, and SR2 Scenic Quality Thresholds. The project contributes to: (1) Threshold V1 by improving the species richness, relative abundance, and natural qualities of deciduous riparian plant communities; (2) Threshold W2 by increasing the acreage and improving the condition of deciduous riparian wildlife habitat; (3) Threshold SC2 by restoring acres within the stream environment zone; and (4) Threshold SR2 by improving views and visual features from roadways and Lake Tahoe. Measures for these thresholds include: (1) changes in species richness and relative abundance; (2) acres of deciduous riparian wildlife habitat created or improved; (3) SEZ acres restored; and (4) changes in scenic quality rating indices.

- Describe the estimated environmental risks from unintended consequences of the proposed project (if applicable)**.**

Pile burning is a common practice; yet pile burning in aspen has potential for unintended consequences such as causing a net loss in stand vigor or regeneration. The estimated level of risk is low because slash piles typically cover less than 20% (by area) of a stand and because the number of acres treated (less than 152 acres of the piles proposed are located in aspen) is very small compared to the acreage present within the project area (2,400 acres). However, the LTBMU initiated collaboration with Humboldt State University to monitor the effects of pile burning in aspen. Controlling variables such as pile diameter and height and using monitoring to inform management practices are the basis of this Round 11 project’s adaptive management framework.

Accomplishments

- Describe the anticipated project accomplishments (i.e. products or identifiable environmental benefits being produced or implemented under this project)

Note: *Differentiate between direct and/or primary project effects and secondary and/or overall watershed effects.*

Approximately 152 acres of pile burning and approximately 29 acres of aspen restoration will be accomplished by the Round 11 phase of the Aspen Community Restoration Project.

The primary benefits of project implementation for these stands include the following:

1. Aspen dominate the upper canopy for the next 20 years;
2. Conifers comprise less than 25% of the canopy for the next 20 years;
3. Aspen regeneration is vigorous (i.e., ≥ 500 stems/acre) within three years;
4. Aspen stand expansion is initiated within three years;
5. Aspen stands regenerate and mature toward a low or negligible risk of loss during the 20 years following treatment; and
6. Aspen and associated deciduous tree, shrub, and herbaceous habitats are improved and benefit the biological diversity and ecological condition of the forest.

Secondary benefits anticipated to result from the restoration of aspen stands include:

1. Aspen stand resilience to wildfire will be improved and wildfire behavior within and adjacent to treated stands will be moderated through conifer removal.
    a. Wildland fire burn severity and duration within treated aspen stands will be reduced;
    b. Risks to heritage resources and visual resources from wildland fire will be reduced; and
    c. Aspen stands in the desired condition will act as natural fire-breaks on the landscape.
2. Aspen community health and vigor will be improved as sunlight and subsurface water become more readily available to aspen and associated understory plant communities (i.e., mountain pennyroyal and California corn lily).
    a. Greater availability of subsurface water will improve the ability of aspen to repel insects and diseases, especially during periods of drought;
    b. Resistance to conifer invasion will be improved in treated stands where reduced transpiration rates lead to increased subsurface water, as conifers generally prefer drier soils than aspen do; and
    c. Infiltration and hydrologic function will improve in treated stands with healthy aspen understory plant communities.
3. The composition, species richness, and function of forested areas and associated wildlife and plant communities will be improved.
4. Visual resources will be improved as treated aspen stands regenerate and mature.

- Describe how the project results/accomplishments will be communicated and made available to the public.

Project accomplishments are reported in the LTBMU Annual Monitoring Report and Annual Wildlife Report.

- If you checked "yes" for the project being consistent with and contributes to TMDL pollutant reductions please consider and integrate the following in the project description:

  a) Describe whether, and how, the project demonstrates advanced, alternative, or innovative practices.

  b) If project includes project level monitoring, describe ability of proposed monitoring strategy to contribute to the state of TMDL knowledge. Also describe if purpose of the capital project is to conduct data collection and/or analysis related to Lake Tahoe clarity.

  c) Describe treatment approach for reducing pollutants and/or measures to address connectivity between pollutant sources and Lake Tahoe or its tributaries. Identify target pollutants, and, to the degree feasible, provide quantitative estimates of project effectiveness at reducing pollutant loads (and/or a commitment to provide post-project estimates).

  d) If appropriate, describe whether, and how, the project can be combined or coordinated with other TMDL implementation projects.

Monitoring

- Describe the project monitoring that will be implemented as part of this project including:

  - List the questions the monitoring program is designed to answer.

The monitoring program for the multi-phased Aspen Community Restoration Project has two independent emphasis areas: Best Management Practices (BMPs) and effects of pile burning in aspen.

1) Best Management Practices (BMPs) monitoring will be conducted for mechanical treatments in the R11 project. The monitoring question is: "Were soil and water quality protection BMPs implemented as planned/designed?"
2) Pile burning in aspen monitoring will be conducted as part of the Round 11 project. The monitoring question is: "Did the pile burning affect aspen regeneration?"

Please note: Wildlife community response monitoring will not conducted as part of this Round 11 project. Wildlife community response, pre-implementation monitoring was completed in earlier project phases (2004-09). Post-implementation monitoring will wait for approximately 5 years to let the stands respond (e.g. grow and expand) and to accomplish enough acres for a sufficient sample size before assessing wildlife community response.

  - Describe any coordination with, or input from, the science community on monitoring and adaptive management that has occurred on the development of this nomination and what changes (if any) to the project were made as a result of this input.

1) As we are following established protocols (developed by Region 5 USFS and State Water Board), no input was solicited or received for BMP monitoring.
2) Pile burning in aspen monitoring was developed by Humboldt State University with input and review from the LTBMU. The size and distribution of slash piles were affected as a result of the collaboration.

Please note: Texas A&M, University of Arizona, and University of Nevada at Reno completed pre-implementation wildlife community monitoring under contract with the LTBMU. Current science suggests that conifer-free aspen stands provide the greatest benefit to wildlife; Round 11 thinning prescriptions incorporate these findings to the extent feasible (with consideration for old forest trees, sun scald, and wind-throw). Coordination with the science community to assess wildlife community response will continue after treated stands have had time to respond (about 5 years).

  - Describe the methods and strategies (i.e. monitoring, research, or both) that will be used to verify whether the project goals and objectives have been met? (*Note: A detailed monitoring plan and/or research plan is not required, however, enough detail must be provided to allow someone that is unfamiliar with the project to understand and evaluate the proposed methods and strategies.*)

1) BMP monitoring will be conducted using a BMP implementation checklist. The BMP checklist includes all BMPs identified in the NEPA document for this project and evaluates whether the BMPs were implemented as described.
2) Pile burning in aspen monitoring will include quantification and evaluation of pre-and post-treatment conditions such as tree size and location, stocking (e.g.

basal area and number of trees), tree species composition, ground cover vegetation, and environmental data (topography, proximity to watercourse, etc.). Hemispherical photographs will be analyzed for stand conditions such as canopy cover and total growing-season light reaching the understory, which are correlated with regeneration. Existing regeneration will be assessed so that it can be separated from regeneration arising after/in response to restoration treatments.

- Describe whether the monitoring or research associated with this project fits into or is part of a larger monitoring or research program.

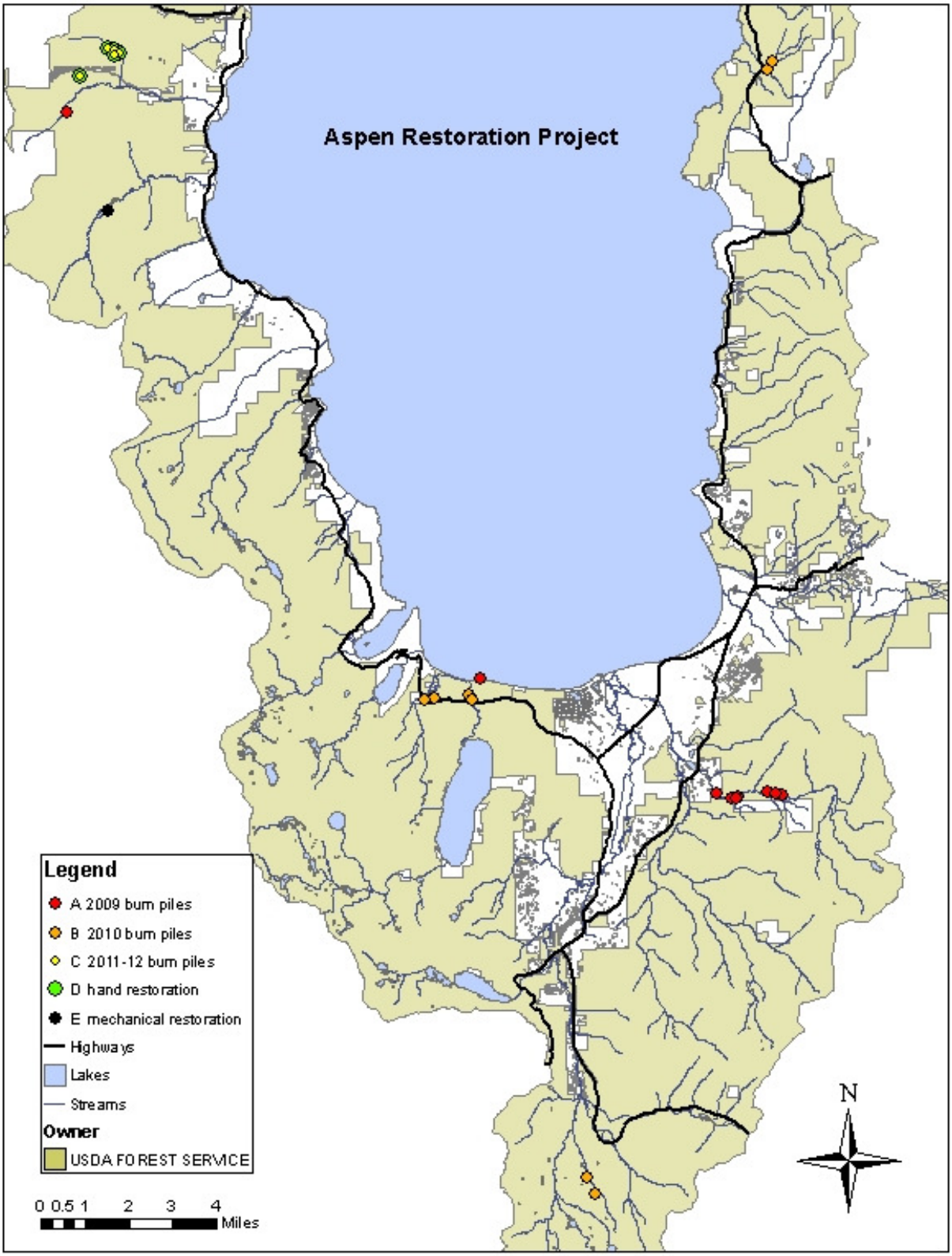
1) The BMP monitoring for this project is very basic and not part of a larger program.
2) The pile burning in aspen monitoring fits into, and has been coordinated with, the larger picture of SEZ and upland pile-burning monitoring across the Lake Tahoe Basin.

- Describe how information from the monitoring and/or research will be used to improve the continued performance of the proposed project or future similar projects.

1) BMP information collected is used to install new or additional BMPs or redesign BMPs to be successful.
2) Pile burning in aspen monitoring is part of an adaptive management framework that will inform and improve the continued performance of the Aspen Community Restoration Project and similar projects west of the Rocky Mountains (i.e. those with similar forest composition, aspen stand distribution, wildland fire regimes, and site conditions). Information from this monitoring will influence project aspects such as the proximity of piles to aspen and the maximum size of slash piles in future restoration stands.

Attachments

- If applicable, include 8 ½ X 11 map depicting the project


Aspen Restoration Project
Legend
A 2009 burn piles
B 2010 burn piles
C 2011-12 burn piles
D hand restoration
E mechanical restoration
Highways
Lakes
Streams
Owner
USDA FOREST SERVICE
0 0.5 1 2 3 4
Miles
N

Appendix B-8

LAKE TAHOE RESTORATION PROJECTS
ESTIMATED NECESSARY EXPENSES & KEY MILESTONE DATES

Project Name:	Aspen Community Restoration	Agency:	USFS, LTBMU
Prepared by:	Victor Lyon	Phone:	(530) 543-2749
SNPLMA Project #:		EIP #:	10080

Identify estimated costs of eligible reimbursement expenses:

1. Planning, Environmental Assessment and Research Costs (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)	$ 20,000	6 %
2. FWS Consultation – Endangered Species Act	$ 0	0 %
3. Direct Labor (Payroll) to Perform the Project	$ 63,250	19 %
4. Project Equipment (tools, software, specialized equipment, etc.)	$ 500	<1 %
5. Travel (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)	$ 1,000	<1 %
6. Official Vehicle Use (pro rata cost for use of Official Vehicles when required to carry out project)	$ 700	<1 %
7. Cost of Contracts, Grants and/or Agreements to Perform the Project	$ 184,950	56 %
8. Other Direct and Contracted Labor: Agency payroll for the Contracting Officer to do project procurement, COR, Project Inspector, Sec. 106 Consultation if required, NEPA Lead, Project Manager, Project Supervisor, and subject experts to review contracted surveys, designs/drawings, plans, reports, etc.; Also covered is the cost to contract for a Project Manager and/or Project Supervisor if contracted separately from other project contracts)	$ 20,000	6 %
9. Other Necessary Expenses (see Appendix B-9)	$ 39,600	12 %
TOTAL:	$ 330,000	100 %

Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
Complete hand and mechanical thinning	12/31/2013
Complete monitoring	12/31/2013
Complete pile burning	12/31/2014
Final Completion Date: 6/30/2015	

COMMENTS:

Other Necessary Expenses is a set amount of 12% of the project's estimated total for the LTBMU. An additional 6 months is included for the administrative task of closing the project.